

## **IN THE CLAIMS**

This listing of claims replaces all prior versions, and listings, in this application.

1. (currently amended) A method of assaying for vascular dysfunction in a subject affected by ~~or at risk for~~ a neurodegenerative disorder or another cognitive impairment, said method comprising determining that whether there is inappropriate senescence and/or defective angiogenesis in at least endothelium of the subject or cells derived from endothelium of the subject which is indicative of vascular dysfunction.
2. (currently amended) The method according to Claim 1, wherein said subject is affected by ~~or at risk for~~ Alzheimer's disease.
3. (original) The method according to Claim 1, wherein said subject is human.
4. (previously presented) The method according to Claim 1 which further comprises obtaining endothelial cells from said subject and culturing said cells to provide derived cells, wherein inappropriate senescence and/or defective angiogenesis in at least said derived cells is indicative of vascular dysfunction.
5. (previously presented) The method according to Claim 1, wherein there is at least (a) abnormal response by endothelial cells to angiogenic signaling; (b) anoikis, apoptosis, or programmed cell death; (c) mitotic catastrophe; (d) a storage disorder, or (e) a combination thereof.
6. (previously presented) The method according to Claim 1, wherein there is at least (a) defective differentiation of endothelial cells, (b) defective fusion of capillaries or vessels, (c) inappropriate regression of capillaries or vessels, or (d) a combination thereof.

Claims 7-26 (canceled)

27. (new) A method of assaying for vascular dysfunction in a human subject affected by a neurodegenerative disorder or another cognitive impairment, said method comprising:

- (a) obtaining endothelial cells from said human subject,
- (b) culturing the endothelial cells to provide cells derived from endothelium, and
- (c) determining whether there is inappropriate senescence and/or defective angiogenesis in the cells derived from endothelium;

wherein inappropriate senescence and/or defective angiogenesis in the cells derived from endothelium is indicative of vascular dysfunction.

28. (new) The method according to Claim 27, wherein there is at least abnormal response by cells derived from endothelium to angiogenic signaling.

29. (new) The method according to Claim 27, wherein there is at least anoikis, apoptosis, or programmed cell death of cells derived from endothelium.

30. (new) The method according to Claim 27, wherein there is at least mitotic catastrophe of cells derived from endothelium.

31. (new) The method according to Claim 27, wherein there is at least a storage disorder of cells derived from endothelium.

32. (new) The method according to Claim 27, wherein there is at least (a) defective differentiation of endothelial cells, (b) defective fusion of capillaries or vessels, (c) inappropriate regression of capillaries or vessels, or (d) a combination thereof.

33. (new) A method of assaying for vascular dysfunction in a human subject affected by Alzheimer's disease, said method comprising:

- (a) obtaining endothelial cells from said human subject,
- (b) culturing the endothelial cells to provide cells derived from endothelium, and

(c) determining whether there is inappropriate senescence and/or defective angiogenesis in the cells derived from endothelium;  
wherein inappropriate senescence and/or defective angiogenesis in the cells derived from endothelium is indicative of vascular dysfunction.

34. (new) The method according to Claim 33, wherein there is at least abnormal response by cells derived from endothelium to angiogenic signaling.

35. (new) The method according to Claim 33, wherein there is at least anoikis, apoptosis, or programmed cell death of cells derived from endothelium.

36. (new) The method according to Claim 33, wherein there is at least mitotic catastrophe of cells derived from endothelium.

37. (new) The method according to Claim 33, wherein there is at least a storage disorder of cells derived from endothelium.

38. (new) The method according to Claim 33, wherein there is at least (a) defective differentiation of endothelial cells, (b) defective fusion of capillaries or vessels, (c) inappropriate regression of capillaries or vessels, or (d) a combination thereof.

39. (new) A method of assaying for vascular dysfunction in a human subject affected by a neurodegenerative disorder or another cognitive impairment, said method comprising determining whether there is defective angiogenesis in at least endothelium of the human subject or cells derived from endothelium of the human subject, wherein defective angiogenesis is indicative of vascular dysfunction.

40. (new) The method according to Claim 39, wherein there is at least (a) defective differentiation of endothelial cells, (b) defective fusion of capillaries or vessels, (c) inappropriate regression of capillaries or vessels, or (d) a combination thereof.